

**IN THE DRAWINGS**

The lead line associated with the numeral 1A has been corrected to indicate the front surface 1A of the laser markable tape 1 in drawing Fig. 3.

Also, drawing Fig. 5 has been corrected to show two marking tapes 1B associated with the description of the invention in paragraph numbered [0041].

**REMARKS**

In the specification, paragraph [0041] has been amended to correct minor editorial problem to add the numeral 1A.

Claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 are currently pending in the application.

Claims 7, 15, and 23 have been canceled.

Claims 1, 3, 4, 6 through 9, 11, 12, 14 through 17, 19, 20, and 22, through 24 were rejected in a Final Rejection.

Applicants propose to amend claims 1, 4, 6, 9, and 17, and respectfully request reconsideration of the application as proposed to be amended herein.

**Objections to Specification**

In the specification, paragraph [0041] has been amended to correct minor editorial problem to add the numeral 1B therein instead of numeral 1A. The amendment to the specification in paragraph [0041] clearly complies with the provisions of 35 U.S.C. § 132 as no new matter has been added to the application as the change in the drawing Fig.3 complies with the description of the invention in specification paragraph numbered [0041].

**35 U.S.C. § 112 Claim Rejections**

Claims 1, 3, 4, 6 through 9, 11, 12, 14 through 17, 19, 20 and 22 through 24 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicants respectfully traverse this rejection, as hereinafter set forth.

Applicants assert that presently pending claims 1, 3, 4, 6, 8, 9, 11, 12, 14, 16, 17, 19, 20, 22 and 24 clearly comply with the provisions of 35 U.S.C. § 112. Referring to paragraph numbered [0033] of the specification and drawing Fig. 3, illustrated and described is a laser beam 115 impinging on a laser markable tape 1, the material of, on embedded in, attached to, or under laser markable tape 1 being altered, e.g., by heating, vaporization, burning, melting, chemical reaction, residue or dye transfer, or combinations thereof. The result comprising a color or

texture change or both, having the image of shadow mask 106, appearing on the backside surface 24 of thinned semiconductor die 20. Clearly, the tape 1 is not opaque to the laser beam 115.

In paragraph numbered [0036] of the specification the terms laser markable tape and marking tape are intended to refer to any tape configured such that, upon impact or heating by a laser, component or inherent characteristics of the tape allow for the formation or transfer of a distinct and permanent or semi-permanent mark onto a surface of a semiconductor die.

In paragraph numbered [0045] of the specification it is further contemplated that marking tape 1 can be applied in a plurality of marking tape layers 1B . . . such that one or more tapes contain one or more pigments transferable to the surface of the die. Alternately, materials comprising multiple layers of marking tape may be formed to chemically react with one another, and/or a surface of the semiconductor die, in the presence of a laser to form a discernable mark.

Nowhere in the specification does the tape 1 require an adhesive to be an outer layer. Nowhere does the specification describe multiple layers of adhesive become integrally one layer after subjected to a laser beam. The tape 1 always has the adhesive next to the semiconductor die 20 to be adhered thereto.

### **Objections to Claims**

Claims 7, 15, and 23 have been canceled.

### **35 U.S.C. § 102(b) Anticipation Rejections**

#### Anticipation Rejection Based on U.S. Patent 5,972,234 to Weng et al.

Claims 1, 3, 4, 6 through 9, 11, 12, 14 through 17, 19, 20, and 22 through 24 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Weng et al. (U.S. Patent 5,972,234). Applicants respectfully traverse this rejection, as hereinafter set forth.

Applicants assert that a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

After considering the objections, the rejections, and the cited prior art, Applicants have amended the claimed inventions of presently amended independent claims 1, 9, and 17 to clearly distinguish over the cited prior art.

Turning to the cited prior art, Weng et al. describes a method for marking a semiconductor surface. Weng et al. describe a polymeric tape can be provided that is suitable for ablative photodecomposition. Column 4 lines 25-40. In other words, the mark which is to be formed in the semiconductor surface is first formed as a cavity through the tape using “high-intensity energy beams such as ultraviolet light or laser.” Column 4 lines 32-33; *See also* column 2 lines 63-63, column 3 lines 6-11, column 3 lines 22-23, column 3 lines 27-30, column 3 lines 39-40, column 4 lines 52-54. After the mark has been formed *through* the tape, the tape is applied to the semiconductor surface. Column 4 line 57 – column 5 line 7. Finally, the mark is formed in the semiconductor surface by etching the semiconductor in the area exposed by the mark formed in the tape. The tape protects the rest of the semiconductor surface from the etchant, such that the mark in the tape is patterned into the semiconductor surface. Column 5 lines 8-25. Finally, the tape is removed from the surface of the semiconductor, leaving the mark formed by the etchant. Column 5 lines 27 – 37. The tape has a thickness of about 0.5 mm and can be provided with an adhesive backing or without an adhesive backing. Column 5, lines 38-41. A suitable adhesive may be an acrylic type polymer. Column 4, lines 63,64.

Applicants assert that the Weng et al. reference cannot and does not anticipate the presently claimed inventions of presently amended independent claims 1, 9, and 17 under 35 U.S.C. § 102 because the Weng et al. reference does not identically describe each and every element of the presently claimed inventions in as complete detail as contained in the claims. First, Applicants have amended independent claims 1, 9, and 17 to clearly set forth “a first outermost adhesive layer comprising a mixture of electromagnetic radiation-curable components, the electromagnetic radiation-curable components providing a laser-markable surface upon exposure to an electromagnetic radiation source by curing and bonding to at least a portion of a semiconductor device” and “a second adhesive layer disposed between the tape and the first outermost adhesive layer, the second adhesive layer comprising a mixture of electromagnetic radiation-curable components so that when exposed to radiation the second adhesive layer performs at least one of curing onto portions of the first outermost adhesive layer and losing

adhesive properties for facilitating peeling of the flexible film material from at least a portion of a surface of a semiconductor device”. The claim language is not optional as to the either of the adhesive layers so that the prior art must account for both adhesive layers for a proper rejection under 35 U.S.C. § 102.

In contrast to the presently claimed inventions of presently amended independent claims 1, 9, and 17, the Weng et al. reference does not identically describe the elements of the presently claimed inventions of presently amended independent claims 1, 9, and 17 calling for “a tape comprising a flexible film material . . . and a multilayer adhesive . . . .” In contrast to the presently claimed inventions of presently amended independent claims 1, 6, and 17, the Weng et al. reference, at best, describes a tape having one single adhesive layer, not a tape having multilayer adhesive. Therefore, the Weng et al. reference cannot and does not anticipate the presently claimed inventions of presently amended independent claims 1, 9, and 17. Accordingly, such claims are allowable as well as the dependent claims therefrom.

Further, Applicants assert that to include radiation-curable components into any adhesive layer formed in the tape disclosed by Weng et al. would render the invention inoperable. Specifically, applying radiation would *cure* the adhesive layer, which would prevent a pattern from being formed through the tape. Therefore, no mark could be formed through the tape by an ablative photodecomposition process if the adhesive layer of the tape were to include radiation-curable components. Applicants respectfully assert that a tape comprising an adhesive layer including radiation-curable components is not “any suitable tape of polymeric based material, which can be easily patterned by high-intensity energy beams such as ultraviolet light or laser.”

Additionally, Applicants assert that the Weng et al. reference merely describes a photodecomposition process employing an excimer type laser for ablating the polymeric based tape. The Weng et al. reference contains no description whatsoever as to how an excimer laser affects the adhesive. Applicants assert that absent any description as to how an excimer laser affects the adhesive used with the tape, any rejection based upon the Weng et al. reference is based solely upon Applicants’ disclosure, not the cited prior art. In any event, Applicants assert that absent any description as to the affect of an excimer laser on the adhesive in the Weng et al. reference, the Weng et al. reference cannot and does not either expressly or inherently identically describe each and every element of the presently claimed inventions of presently amended

independent claims 1, 9, and 17 calling for “a tape comprising a flexible film material . . . . and a multilayer adhesive . . . .”.

In summary, Applicants assert that Weng et al. cannot and does not anticipate the presently claimed inventions of presently amended independent claims 1, 9, and 17 for the reasons set forth herein.

Applicants submit that claims 1, 3, 4, 6, 7, 8, 11, 12, 14, 16, 17, 19, 20, 21, 22 and 24 are clearly allowable over the cited prior art.

Applicants request entry of this amendment for the following reasons:

The amendment is timely filed.

The amendment does not require any further search or consideration.

The amendment places the application in condition for allowance.

#### CONCLUSION

Claims 1, 3, 4, 6, 7, 8, 11, 12, 14, 16, 17, 19, 20, 21, 22 and 24 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicants' undersigned attorney.

Respectfully submitted,

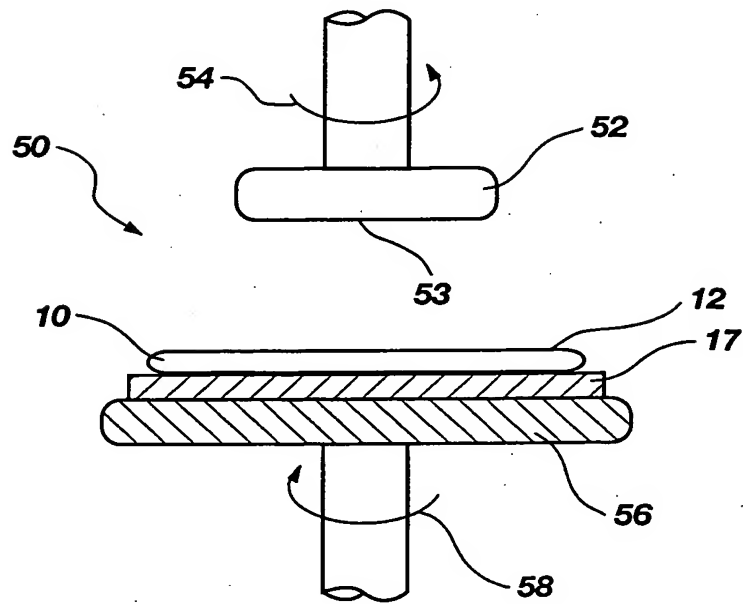


James R. Duzan  
Registration No. 28,393  
Attorney for Applicant(s)  
TRASKBRITT  
P.O. Box 2550  
Salt Lake City, Utah 84110-2550  
Telephone: 801-532-1922

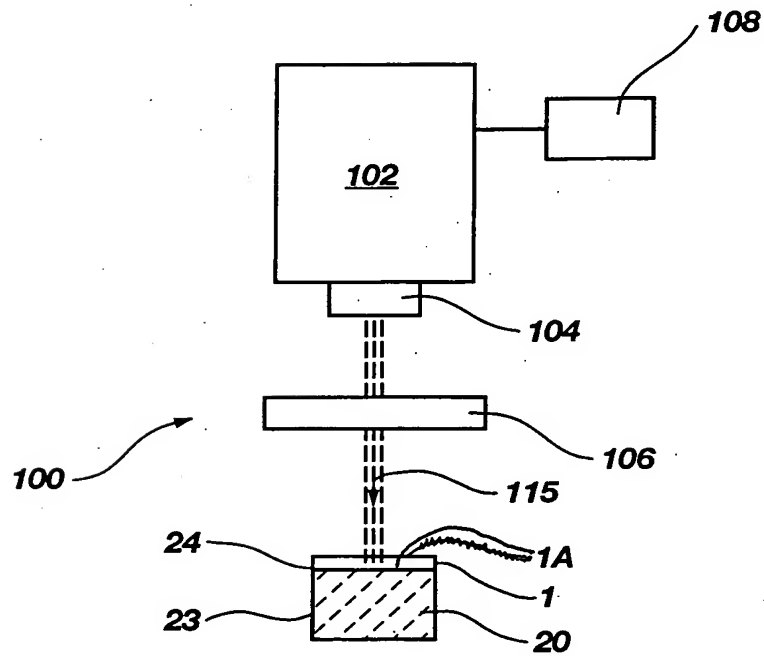
Date: December 17, 2004

JRD/nj:dh

Document in ProLaw



**Fig. 2**



**Fig. 3**

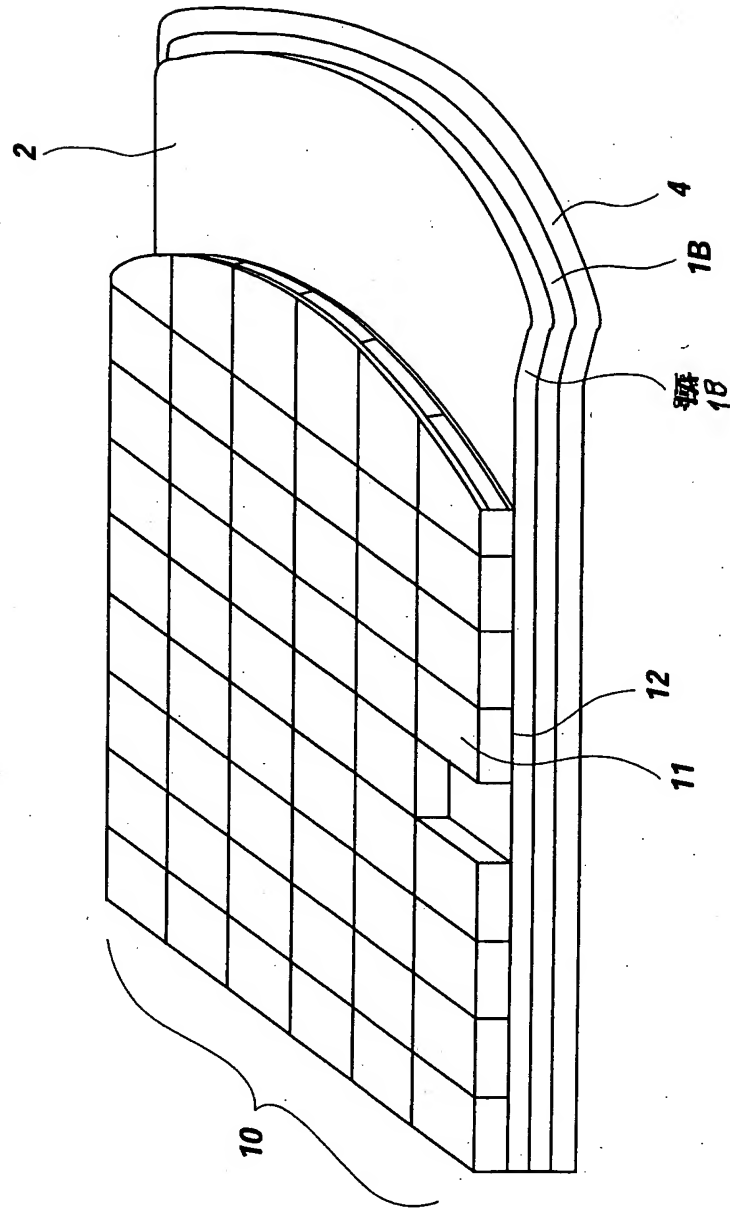


Fig. 5